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FINAL REPORT

GLEN-TUNGSTEN MILLSITE RECLAMATION PROJECT

DSL-AMRB-90-002

Beaverhead County
Western Montana
T4S, R9W, Sec 4

January, 1991

Prepared by:
L.C. HANSON COMPANY
Consulting Engineers & Surveyors
2969 Airport Road
Helena, MT

MONTANA
LOWELL C.
HANSON
2523ES
REGISTERED PROFESSIONAL ENGINEER

Lowell C. Hanson
1/4/91

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1. INTRODUCTION

1.1 Site Description

The GLEN-TUNGSTEN MILLSITE was a large tungsten milling operation located 21 miles north of Dillon, Montana in the S 1/2 of Section 4, T4S, R9W, Beaverhead County, Montana. The mill was operated in the 1950's, leaving the dry tailing ponds and deteriorated mill and office complex as the remnants of this mining era. The barren sediment filled tailing ponds and abandoned structures were the major problems at this site.

1.2 Map Showing Mine Location (see following page)

1.3 Project Objectives

The project was undertaken to reduce the hazards resulting from the abandoned tungsten millsite. The objectives of the work were accomplished by: removing debris, salvaging and replacing cover soil, overlaying the tailings ponds with a suitable soil to reduce blowing and promote vegetative growth, revegetation and fencing of the disturbed areas, and providing for positive drainage within the rehabilitated area. A secondary objective was to return the abandoned tungsten millsite to agricultural productivity.

2. RESPONSIBLE PARTIES

2.1 Contractor

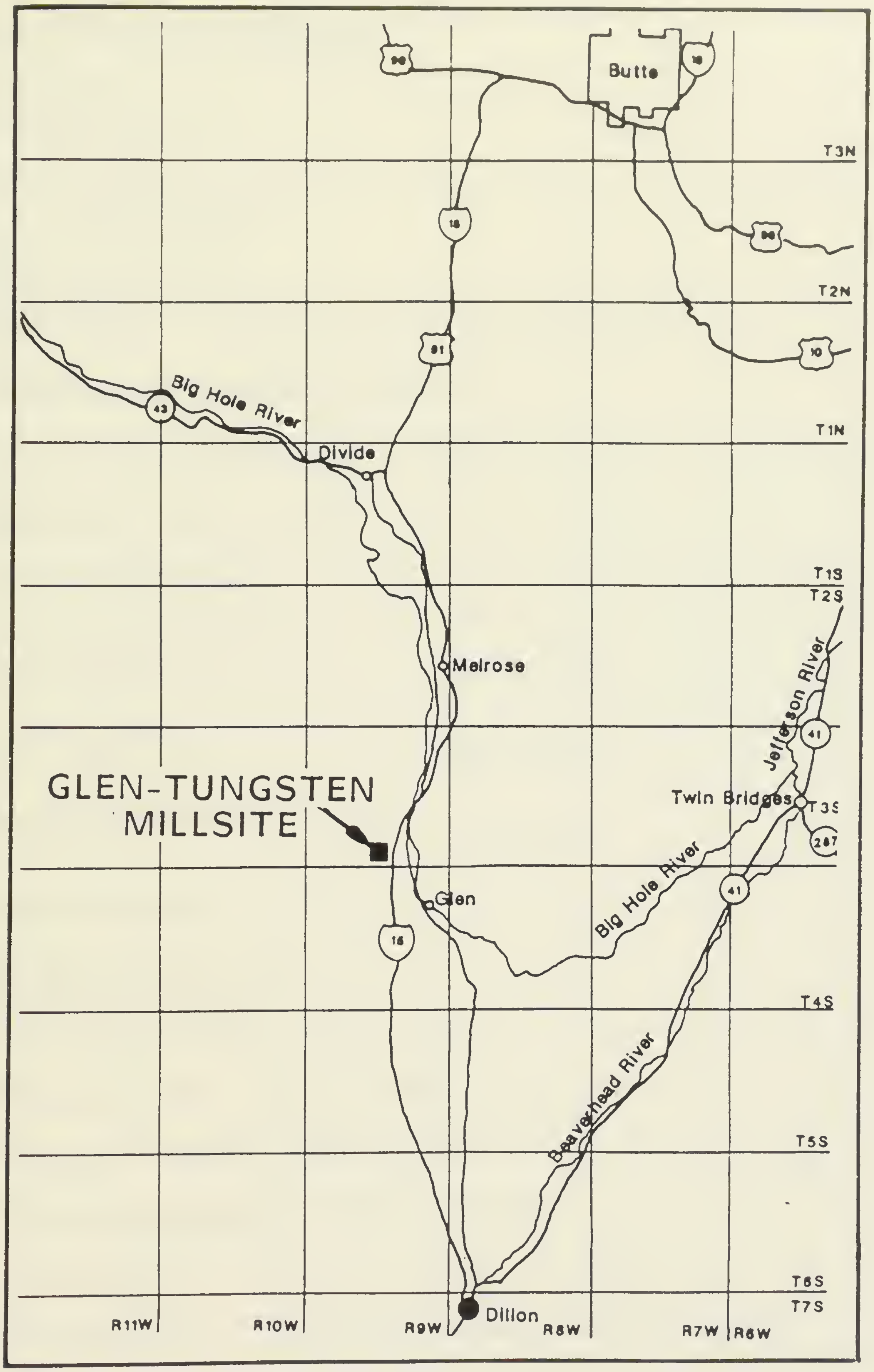
Baxter Construction
4014 Hardin Road
Billings, MT 59107

2.2 Reclamation Plan

Hydrometrics, Inc.
2727 Airport Road
Helena, MT 59601

2.3 Engineering Plan

Hydrometrics, Inc.
2727 Airport Road
Helena, MT 59601


Butte
90
15
T3N
15
90
T2N
91
10
43
Big Hole River
T1N
Divide
T1S
T2S
Melrose
Jefferson River
41
GLEN-TUNGSTEN MILLSITE
Twin Bridges
T3S
287
Big Hole River
41
Glen
15
T4S
Beaverhead River
T5S
T6S
T7S
Dillon
R11W
R10W
R9W
R8W
R7W
R6W

AREA MAP

2.4 Quality Control Inspection

Dan March
Hydrometrics Inc.

Bernard Kelly
L.C. Hanson Company

2.5 AMRB Coordination

John Koerth - Design and Construction Phases.

3. CHRONOLOGICAL LISTING OF EVENTS

3.1 Pre-Bid Conference - May 9, 1990

3.2 Bid Date - May 17, 1990

3.3 Three Lowest Bids

Baxter Construction Billings, MT	$62,327.25
Sieben Ranch Wolf Creek, MT	$64,159.56
Montgomery Construction Co. Hilger, MT	$64,615.50

3.4 Contract Award

Baxter Construction
4014 Hardin Road
Billings, MT 59107

3.5 Notice of Award - May 23, 1990

3.6 Notice to Proceed - June 12, 1990

3.7 Construction Start-Up - June 18, 1990

3.8 Change Orders - One (1) November 13, 1990

3.9 Work Stoppages - Temporary shutdown, from 8-4-90 thru 10-15-90.

3.10 Requests for Payment (Baxter Construction)

Request No. 1 - $24,798.24	Granted - July 19, 1990
Request No. 2 - $51,262.07	Granted - August 21, 1990
Request No. 3 (FINAL) $18,663.64	Granted - November 13, 1990

3.11 Substantial Completion - October 20, 1990

3.12 Final Completion and Approval - October 20, 1990

3.13 Final Payment

Final Payment (Total of R.F.P. #1, #2, & #3) - $94,723.95 -November 13, 1990.

4. CONSTRUCTION

4.1 Description of Project Plan

The construction plan for the GLEN-TUNGSTEN MILLSITE, involved surface reclamation only. The project objectives focused on the mitigation of hazards and problems resulting from past milling activity, as well as improving the environment through surface restoration. Sediment filled tailing ponds were contoured and covered with a suitable soil to minimize wind erosion, and provide a seed bed for grass seeding. Debris was removed and burned, positive drainage was established throughout the disturbed area, and fertilizing, seeding and mulching were undertaken in all areas of surface disturbance to return the site to a more aesthetically pleasing and agriculturally productive condition than it was previous to the reclamation of the millsite. Fence was installed around the revegetated areas to protect the new plant growth from livestock.

4.2 Major Equipment List

Type	Make/Model		Quantity
Truck	Ford F800		1
Backhoe	Case 580		1
Scraper	Terex TS-14		1
Scraper	Michigan M-110		1
Water Truck	International	1.5 Mgal. Cap.	1
Farm Tractor	Ford 9600		1
Grass Drill	John Deere "B" Rangeland		1
Disc	John Deere 16′ tandem		1
Mulcher	Custom Built		1
Crimper	Custom Built		1

4.3 Contractor Employees

The Contractor generally maintained a crew of 2 operators, although the number of workers varied according to the workload. The revegetation and fencing was completed by the contractor at the completion of the project.

4.4 Construction Activities

The Contractor began construction on the project by gathering debris from the site and then disposing by burial or burning. Hazardous structures and concrete debris were destroyed on site. Cover soil removed from the borrow areas

was placed and compacted over the sediment filled tailing ponds to a depth of 18". Cover soil borrow areas provided enough material to cover the tailings in the settling ponds. Both the borrow areas and the covered settling ponds were prepared for seeding with a disc, mulch spreader, and mulch crimper. The entire millsite reclaimed area was fenced to protect the new plant growth.

4.5 Quantities Used

The final pay request is Attachment 3. This report contains the final project quantities and costs. Estimated quantites for the lump sum items are as follows:

Item #1 - Mobilization - 1 Unit
Item #2 - Debris Cleanup - 1 Unit

5. PAYMENT REQUESTS

5.1 Final Pay Request - See Attachment 3.

5.2 Cost Per Site

Site Name	Amount
GLEN-TUNGSTEN MILLSITE	$94,723.95

5.3 Total Project Cost

Total cost for the project was $94,723.95

6. PROJECT SUMMARY

6.1 Summary of Project

The reclamation work was completed in 53 calender days, or 76% of the allowable contract time. The total project cost of $94,723.95 was 152% of the original contract estimate. Baxter Construction completed all the work with full cooperation and to a high level of worksmanship. The GLEN-TUNGSTEN MILLSITE was a very straightforward, earthmoving construction project, and there were no unusual or unexpected events that required a change in the construction design.

6.2 Site Condition After Completetion

The GLEN-TUNGSTEN MILLSITE was completed in accordance with the plans and specifications. The Landowner was pleased with the completed project, but the success of the revegetation efforts will not be known until several growing seasons have elapsed.

6.3 As-Built Drawings

The Contract plans and specifications accurately depict the details of the actual construction for this project.

6.4 Maintenance or Follow-up

The GLEN-TUNGSTEN MILLSITE should require only the monitoring of the revegetation effort in the next few years to determine if that effort was successful.

7. COMMENTS/SUGGESTIONS

8. PHOTOGRAPHS/SLIDES

8.1 Listing

See Attachment 6.

8.2 Photo Location Map

Photograph locations are noted on the photograph description sheet.

8.3 Photos/Slides

See Attachment 6.

ATTACHMENT 1

BID TABULATIONS

BID TABULATION

DATE OF BID OPENING:MAY 17,1990
PROJECT NAME:GLEN TUNGSTEN MILLSITE RECLAMATION PROJECT
PROJECT NO.:DSL-AMRB 90-002

L.C.Hanson Co.

				ENGINEER'S ESTIMATE		BAXTER CONSTR. Billings, MT.		SIEBEN RANCH CO. Helena, MT.		MONTGOMERY CONSTR. Hilger, MT.	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL ITEM COST	UNIT COST	TOTAL ITEM COST	UNIT COST	TOTAL ITEM COST	UNIT COST	TOTAL ITEM COST
1	Mobilization	L.S.	1	8000.00	8000.00	6000.00	6000.00	8800.00	8800.00	3500.00	3500.00
2	Grading	ACRE	10.8	200.00	2160.00	250.00	2700.00	1100.00	11880.00	1000.00	10800.00
3	Cover Soil	C.Y.	19085	3.00	57255.00	1.85	35307.25	0.94	17939.90	1.30	24810.50
4	Debris Cleanup	L.S.	1	17000.00	17000.00	4000.00	4000.00	5250.00	5250.00	5000.00	5000.00
5	Remove & Reset Snow Fence	L.F.	1100	2.60	2860.00	0.95	1045.00	1.50	1650.00	2.00	2200.00
6	Farm Fence	L.F.	4860	1.30	6318.00	1.25	6075.00	1.14	5540.40	1.25	6075.00
7	Seed	LBS.	298	11.54	3438.92	10.00	2980.00	7.62	2270.76	10.00	2980.00
8	Fertilizer	LBS.	2300	0.95	2185.00	0.50	1150.00	0.50	1150.00	0.50	1150.00
9	Mulch	TONS	17.25	800.00	13800.00	120.00	2070.00	306.00	5278.50	400.00	6900.00
10	Provide Water	GAL.	40000	0.05	2000.00	0.03	1000.00	0.11	4400.00	0.03	1200.00
	TOTAL				115016.92		62327.25		64159.56		64615.50

ATTACHMENT 2

CHANGE ORDERS

CHANGE ORDER

ORDER NO: One (1)

PROJECT TITLE: GLEN-TUNGSTEN MILLSITE

MONT A/E or DSL-AMRB: 90-002

CONTRACT DATE: June 11, 1990

OWNER: AMR BUREAU - MONTANA DEPT. OF STATE LANDS

CONTRACTOR: W.E. BAXTER CONSTRUCTION 4014 HARDIN BILLINGS, MT 59101

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.

ITEM NO.	DESCRIPTION OF CHANGES-ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
1.	WORK DIRECTIVE CHANGE #1						17,905.80
2.	WORK DIRECTIVE CHANGE #2						100.00
3.	WORK DIRECTIVE CHANGE #3						787.00
4.	RECONCILIATION OF FINAL QUANTITIES						13,603.90

TOTAL COST-MATERIALS, LABOR, EQUIPMENT & MISC. (+) $32,396.70

OVERHEAD & PROFIT @ N/A % 0.00

GRAND TOTAL-THIS CHANGE ORDER $32,396.70

Original Contract Price	$ 62,327.25
Current Contract Price Adjusted by Previous Change Order	62,327.25
Cost this Change Order (+ or -)	(+) 32,396.70
New Contract Price including this Change Order	$ 94,723.95

The completion date as set forth in the Contract Documents shall be (~~unchanged~~, increased, ~~decreased~~) by TEN (10) calendar days.

The date for completion of all work will be September 1, 1990.

Description and Justification for Change:

1. ITEMS #1, #2, AND #3 - See Work Directive Changes for description of work and justification.

ITEM #4 - Reconciliation of final quantities accounts for the difference between the estimated project quantities and the actual quantities required to complete the project.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bond or Bonds is hereby increased by $ $32,396.70 (100% of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby increased by $ $32,396.70 (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA
RESIDENT AGENT

SURETY

By:
Seal

Recommended by: L.C. Hanson Co.
Engineer
11-7-90
Date

Accepted by:
Contractor
11/2/90
Date

Approved by: Larry Marshall
Owner
11/13/90
Date

ATTACHMENT 3

PAYMENT REQUESTS

Payment Request No. 3 (FINAL)

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NOV 15 1990
L. C. HANSON CO.

From: October 15, 1990 To: October 20, 1990

Project Name & Number: GLEN TUNGSTEN MILLSITE (DSL-AMRB 90-002)

Location: Beaverhead County Name of Contractor: W.E.Baxter

Address: 4014 Hardin Road, Billings, MT. 59101

Summary Of Project Status

Amount of Original Contract Work	$62,327.25
Amount of Approved Change Order(s) Work	32,396.70
TOTAL CONTRACT AMOUNT	$94,723.95
Contract Time Used to Date	53 Days
Percentage of Contract Time Used	76%
Percentage of Contract Amount Earned	100%

Amount of Original Contract Work Completed	$60,962.25
Amount of Authorized Overruns(Underruns) Completed	14,968.90
Amount of Approved Change Order(s) Work Completed	18,792.80
Amount for Materials On Site	0.00
AMOUNT OF ALL WORK COMPLETED TO DATE	94,723.95
Times 90% =	
TOTAL AMOUNT Earned To Date	94,723.95
Less Previous Amount Earned	76,060.31
Amount Payable This Period	18,663.64
Less 1% Gross Receipts Tax	186.64
TOTAL DUE CONTRACTOR THIS PERIOD	$18,477.00

==

Requested By: W.E.Baxter Willie E Baxter (Contractor) Date: 11/4/90

Checked By: L.C. Hanson Co. L.C. Hanson Co - Tom Klempel (Engineer) Date: 11-7-90

Approved By: Department of State Lands JN Larry Marshall (Owner) Date: 11/13/90
Abandoned Mine Reclamation Bureau

PAY REQUEST NO.3(FINAL)

L.C.Hanson Co.

PROJECT: GLEN TUNGSTEN MILLSITE MONT. AMRB 90-002

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITIES	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMPL.
1	Mobilization	1.0 L.S.	6000.00	0.0	1.0	6000.00	100*
2	Grading	10.8 ACRE	250.00	0.0	12.8	3200.00	100*
3	Cover Soil	19085.0 C.Y.	1.85	16140.0	24843.0	45959.55	100*
4	Debris Cleanup	1.0 L.S.	4000.00	0.0	1.0	4000.00	100*
5	Remove & Reset Snow		0.00	0.0	0.0	0.00	
	Fence	1100.0 L.F.	0.95	0.0	1188.0	1128.60	100*
6	Farm Fence	4860.0 L.F.	1.25	0.0	4938.0	6172.50	100*
7	Seed	298.0 LBS.	10.00	497.4	497.4	4974.00	100*
8	Fertilize	2300.0 LBS.	0.50	2366.0	2366.0	1183.00	100*
9	Mulch	17.3 TONS	120.00	27.3	27.3	3276.00	100*
10	Provide Water	40000.0 GALS	0.03	0.0	1500.0	37.50	100*
	Total					75931.15	

* Work completed on this item

PAY REQUEST NO.3 (FINAL)

L.C.Hanson Co.

PROJECT: GLEN TUNGSTEN MILLSITE MONT. AMRB 90-002 Page 3 of 3

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITIES	UNIT BID PRICE	UNITS OF WORK COMPLETED THIS REQUEST	UNITS OF WORK COMPLETED TO DATE	TOTAL COST OF COMPLETED WORK	% OF EST. QUANT. COMPL.
1	Work Directive Change #1						
	a.Debris Cleanup						
	Case 580 Backhoe	4.5 HR	45.00		4.5	202.50	100*
	Michigan Scraper 110	0.8 HR	65.00		0.8	48.75	100*
	b.Cover Soil						
	18" Cover Soil	9543.0 CY	1.85	9543.0	9543.0	17654.55	100*
2	Work Directive Change #2						
	a.Debris Cleanup						
	Laborer w/ Torch	4.0 HR	25.00	4.0	4.0	100.00	100*
3	Work Directive Change #3						
	Sweet Clover 2#/AC(PLS)	36.4 LBS	10.00	40.0	40.0	400.00	100*
	Black Medic 2#/AC(PLS)	36.4 LBS	10.00	38.7	38.7	387.00	100*
	Total					18792.80	

* Work completed on this item

ATTACHMENT 4

ANALYSIS OF CONSULTANT COSTS INCURRED

ANALYSIS OF CONSULTANT COSTS INCURRED
FOR THE MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU
AMR PROJECT NUMBER: DSL AMRB-90-002
GLEN/TUNGSTEN
LCH PROJECT NUMBER: 901003
DATE OF PREPARATION: January 4, 1991

ENGINEERING SERVICE	AMOUNT
DESIGN ENGINEERING:	
This work was done by others.	
CONSTRUCTION ENGINEERING AND PROJECT ADMINISTRATION COST:	$25,199.62
PROJECT ENGINEERING COST:	$25,199.62
CONSTRUCTION COST:	$94,723.95

****

TO CALCULATE PERCENTAGE ENGINEERING FEES TO CONSTRUCTION COST:

DESIGN ENGINEERING/CONSTRUCTION COST	*
CONSTRUCTION ENGINEEERING/CONSTRUCTION COST	26.6032%
TOTAL ENGINEERING COST/CONSTRUCTION COST	*

****

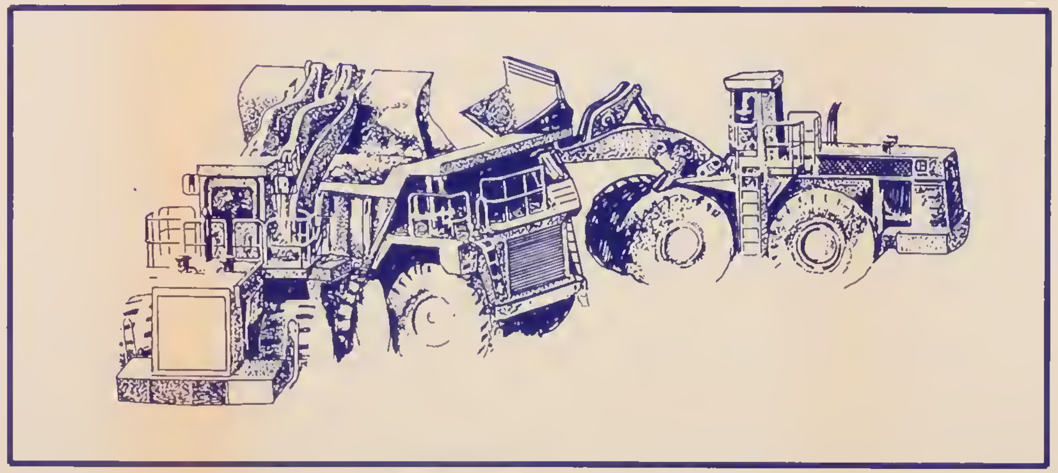
* Consultant costs represent construction inspection and contract administration phases only. Additional consultant fees for other phases of the project were incurred by others but are not shown in this analysis.

ATTACHMENT 5

AS-BUILT DRAWINGS

NOTE: Plan sheets were not reduced to the 11"x17" size for this project. Original mylar drawings were not suitable for quality reduction.

RECLAMATION ENGINEERING PLANS FOR AN ABANDONED TUNGSTEN MILLSITE NEAR GLEN, MONTANA



Prepared For:
Montana Department of State Lands
Abandoned Mine Reclamation Bureau
Helena, Montana

Prepared By:
Hydrometrics, Inc.
Consulting Scientists and Engineers
2727 Airport Road
Helena, Montana

EXHIBIT NO.	EXHIBIT TITLE
1.	Cover Sheet
2.	Quantities and Location Maps
3.	Reclamation Plans

"AS BUILTS"
JANUARY 4, 1991

PREPARED BY
L. C. HANSON CO.

REVISIONS
NO. DATE:

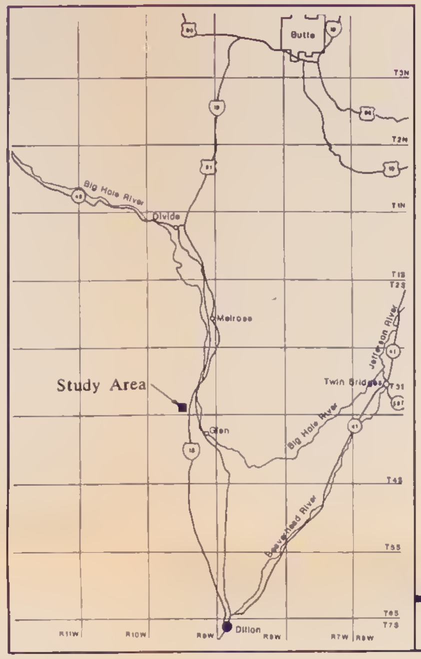
Reclamation Engineering Plans
For
An Abandoned Tungsten Millsite
Near Glen, Montana

Hydrometrics, Inc.
Consulting Scientists & Engineers
Helena, Montana

DRAWN: JHD/BAN
CHECKED: DM
APPROVED: SY
DATE: 2/26/90
Dwg No.

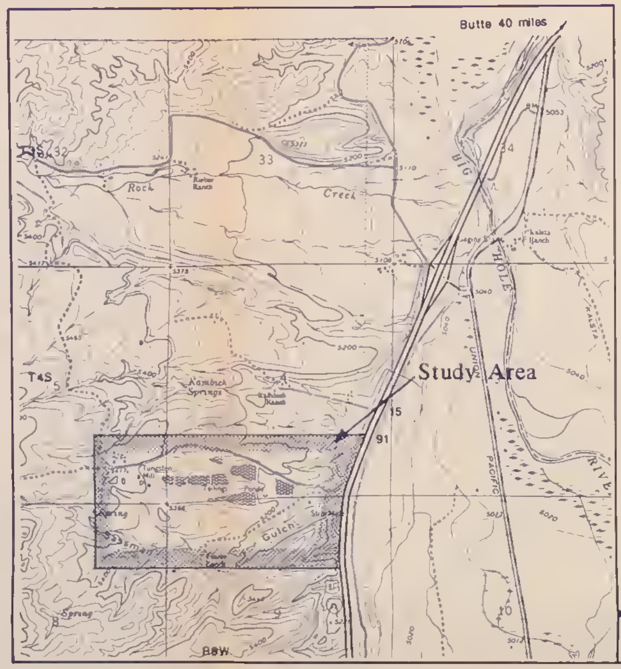
EXHIBIT
1

State of Montana



NORTH

Project Location



NORTH

Site Map

SCALE: 1" = 2000 feet

Notes:

1. Access roads assumed to be 12' wide
2. On all area to be reclaimed, the following quantities of seed, fertilizer and mulch per acre shall be used:
   Seed – 26 lbs/acre
   Fertilizer – 200 lbs/acre
   Mulch – 3000 lbs/acre

Contact People:

Surface Owner: Bob Bumb
Bureau of Land Management
Dillon Resource Center
730 No. Montana
Dillon, Mt 59725
(406) 683-2337

Mineral Rights Owner: Garrand Corporation
℅ Leonard Garrand
10 Exchange Place
Salt Lake City, Ut. 84111
(801) 359-5042

Description	Quantity
MOBILIZATION	1 LUMP SUM
GRADING	12.8 ACRES
COVER SOIL	24,843 CUBIC YARDS
DEBRIS CLEANUP	1 LUMP SUM
REMOVE AND RESET SNOW FENCE	1188 LINEAL FEET
FARM FENCE	4938 LINEAL FEET
REMOVE AND RESET FARM FENCE	0 LINEAL FEET
SEED	497.4 LBS
FERTILIZE	2366.0 LBS
MULCH	273 TONS
WATER	1500 GALLONS

Quantity Estimates

"AS BUILTS"
JANUARY 4, 1991

PREPARED BY
L. C. HANSON CO.

REVISIONS

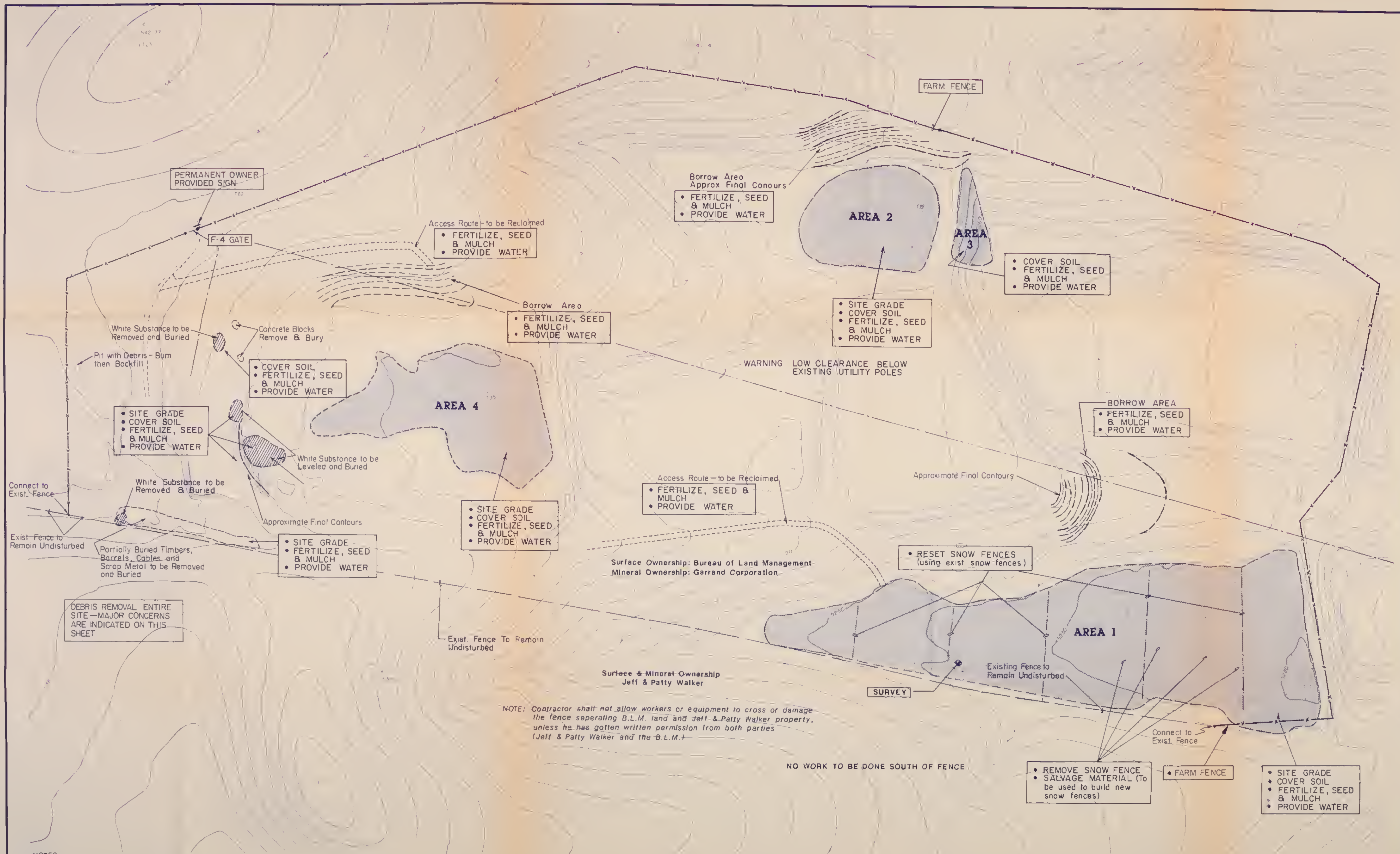
NO.	DATE:

QUANTITIES & LOCATION MAPS

Hydrometrics, Inc.
Consulting Scientists & Engineers
Helena, Montana

DRAWN B. Nye
CHECKED D. March
APPROVED S.M. Yost
DATE. 4/19/90
REVISION

EXHIBIT
2


FARM FENCE
PERMANENT OWNER PROVIDED SIGN
Borrow Area Approx Final Conours
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
AREA 2
AREA 3
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
Access Route – to be Reclaimed
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
F-4 GATE
Borrow Area
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
• SITE GRADE
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
White Substance to be Removed and Buried
Concrete Blocks Remove & Bury
Pit with Debris – Burn then Backfill
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
AREA 4
WARNING LOW CLEARANCE BELOW EXISTING UTILITY POLES
BORROW AREA
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
• SITE GRADE
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
White Substance to be Leveled and Buried
Approximate Final Contours
Connect to Exist. Fence
White Substance to be Removed & Buried
Access Route – to be Reclaimed
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
Approximate Final Contours
• SITE GRADE
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
Exist. Fence to Remain Undisturbed
Partially Buried Timbers, Barrels, Cables and Scrap Metal to be Removed and Buried
• SITE GRADE
• FERTILIZE, SEED & MULCH
• PROVIDE WATER
Surface Ownership: Bureau of Land Management
Mineral Ownership: Garrand Corporation
• RESET SNOW FENCES (using exist snow fences)
DEBRIS REMOVAL ENTIRE SITE – MAJOR CONCERNS ARE INDICATED ON THIS SHEET
Exist. Fence To Remain Undisturbed
AREA 1
Existing Fence to Remain Undisturbed
Surface & Mineral Ownership Jeff & Patty Walker
SURVEY
NOTE: Contractor shall not allow workers or equipment to cross or damage the fence seperating B.L.M. land and Jeff & Patty Walker property, unless he has gotten written permission from both parties (Jeff & Patty Walker and the B.L.M.)
Connect to Exist. Fence
NO WORK TO BE DONE SOUTH OF FENCE
• REMOVE SNOW FENCE
• SALVAGE MATERIAL (To be used to build new snow fences)
• FARM FENCE
• SITE GRADE
• COVER SOIL
• FERTILIZE, SEED & MULCH
• PROVIDE WATER

NOTES:

1) BORROW AREAS SHALL BE CONTOURED TO A SLOPE NOT GREATER THAN 4:1 AND NOT LESS THAN 1%.

2) WHERE DIKE MATERIAL IS USED AS COVER MATERIAL, A BERM OF A MINIMUM OF 2 FEET HIGH SHALL REMAIN TO PREVENT SOIL EROSION.

3) DEBRIS TO BE BURIED IN AREA (4) PRIOR TO COVERSOIL PLACEMENT

4) POWER LINES AND POLES ARE TO REMAIN UNDISTURBED.

5) SEE SPEC'S FOR LOCATION OF DISPOSAL AREA FOR WHITE SUBSTANCE. WHITE SUBSTANCE IS A SALT USED IN THE TUNGSTEN MILLING PROCESS, AND HAS BEEN DETERMINED TO BE NON-TOXIC.

LEGEND

△ = Horizontal and vertical control
○ : Vertical control
T36 = Photogrammetric spot elevation
⊕ = Photo center
= Road
= Poor road
FL = Trail or field line (FL)
○ = Pole
□ = Building
w = Water
□ = Concrete pad
○ = Tree or group of trees
= Retaining wall
= Fence
Exc. = Excavation

"AS BUILTS"
JANUARY 4, 1991

PREPARED BY
L. C. HANSON CO.

MAP PREPARED BY:
Photography: Montana Aerial Photography Missoula, Montana
Control: Territorial Engineering and Surveying Missoula, Montana
Mapping: Missoula Blueprint Co. Missoula, Montana

NORTH

SCALE
100' 0 100' 200' 300 feet

REVISIONS

NO.	DATE

Glen Tungsten
RECLAMATION SITE PLANS

Hydrometrics, Inc
Consulting Scientists & Engineers
Helena, Montana

DRAWN B.N./J.H.D.
CHECKED O. March
APPROVED S.M.Yost
DATE 4/19/90
REVISION

EXHIBIT
3

ATTACHMENT 6

PHOTOGRAPHS/SLIDES

PHOTOGRAPHS/SLIDES

1. Construction phase - Area #1 - Snow fence removed prior to any cover soil placement.
2. Construction phase - Area #1 - Snow fence removed prior to any cover soil placement.
3. Construction phase - Area #1 - Cover soil placement.
4. Construction phase - Area #1 - Cover soil placement.
5. Construction phase - Area #1 - Cover soil placement.
6. Construction phase - Area #1 - Cover soil placement.
7. Construction phase - Area #1 - Cover soil placement.
8. Construction phase - Area #1 - Cover soil placement.
9. Construction phase - Area #1 - Cover soil placement and borrow area #1.
10. Construction phase - Area #1 - Cover soil placement and borrow area #1.
11. Construction phase - Area #1 - Survey monument within Area #1.
12. Construction phase - Area #1 - Cover soil placement.
13. Construction phase - Area #1 - Showing areas that have received cover soil and areas that have not.
14. Construction phase - Area #1 - Showing areas that have received cover soil and areas that have not.
15. Construction phase - Area #1 - Scrapers in borrow area #1.
16. Construction phase - Area #1 - Scraper in borrow area #1.
17. Construction phase - Area #1 - Scraper in borrow area #1.
18. Construction phase - Area #1 - Scraper in borrow area #1.
19. Construction phase - Area #1 - Scraper in borrow area #1.
20. Construction phase - Area #1 - Removing buried pipe in borrow area #1.
21. Construction phase - Area #1 - Cover soil placement complete.
22. Construction phase - Area #1 - Cover soil placement complete.
23. Construction phase - Area #1 - Cover soil placement complete.
24. Construction phase - Area #1 - Cover soil placement complete.

25. Construction phase - Area #1 - Borrow area completed.
26. Construction phase - Area #1 - Borrow area completed.
27. Construction phase - Area #1 - Access road and additional borrow area completed.
28. Construction phase - Area #1 - Access road and additional borrow area completed.
29. Construction phase - Area #3 - Prior to cover soil placement.
30. Construction phase - Area #3 - Cover soil placement completed.
31. Construction phase - Area #2 - Cover soil placement completed.
32. Construction phase - Area #2 & #3 - Cover soil placement completed.
33. Construction phase - Area #2 & #3 - Borrow area completed.
34. Construction phase - Area #2 - Cover soil placement completed.
35. Construction phase - Area #2 - Cover soil placement completed.
36. Construction phase - Area #2 - Cover soil placement completed. (Note depth of cover material.)
37. Construction phase - Area #4 - Cover soil placement.
38. Construction phase - Area #4 - Debris burial and site grading.
39. Construction phase - Area #4 - Cover soil placement.
40. Construction phase - Area #4 - Borrow area #4 completed.
41. Construction phase - Area #4 - Borrow area #4 completed.
42. Construction phase - Area #4 - Cover soil placement completed.
43. Construction phase - Area #4 - Cover soil placement completed.
44. Construction phase - Southern gallery for debris burial.
45. Construction phase - Northern gallery for debris burial.
46. Construction phase - South Fence Area - Debris cleanup.
47. Construction phase - Area #4 - Debris burial.
48. Construction phase - Area #4 - Debris cleanup completed.
49. Construction phase - Debris cleanup, entire site.
50. Construction phase - Debris cleanup, entire site.
51. Construction phase - Debris burial complete in gallery.

52. Construction phase - Debris burial complete in gallery.
53. Construction phase - Debris and concrete disposal completed.
54. Construction phase - Debris burning pit.
55. Construction phase - Burning debris.
56. Construction phase - Burning debris.
57. Construction phase - Debris and white substance adjacent to south fence.
58. Construction phase - Debris and white substance adjacent to south fence.
59. Construction phase - South Fence Area - Debris cleanup and site grading.
60. Construction phase - South Fence Area - Debris cleanup and site grading.
61. Construction phase - South Fence Area - Site grading.
62. Construction phase - South Fence Area - Site grading.
63. Construction phase - South Fence Area - Site grading completed.
64. Construction phase - South Fence Area - Site grading completed.
65. Construction phase - South Fence Area - Site grading completed.
66. Construction phase - Area #1 - Snow fence replacement.
67. Construction phase - Area #1 - Snow fence replacement.
68. Construction phase - Area #1 - Snow fence replacement.
69. Construction phase - Area #1 - Snow fence replacement.
70. Construction phase - Area #1 - Snow fence replacement.
71. Construction phase - Area #1 - Snow fence replacement.
72. Construction phase - F3M farm fence construction.
73. Construction phase - F3M farm fence construction.
74. Construction phase - F3M farm fence construction.
75. Construction phase - F3M farm fence construction.
76. Construction phase - F3M farm fence construction.
77. Construction phase - F3M farm fence construction.
78. Construction phase - F3M farm fence construction.
79. Construction phase - F3M farm fence construction.

80. Construction phase - F3M farm fence construction.

81. Construction phase - F3M farm fence construction.

82. Construction phase - Completed double panel.

83. Construction phase - Completed double panel.

84. Construction phase - Completed single panel.

85. Construction phase - Completed 16′ gate.

86. Construction phase - Completed metal stay in fence.

87. Construction phase - Completed gate closure device.

88. Construction phase - Area #1 - Broadcasting fertilizer.

89. Construction phase - Area #4 - Discing fertilizer into cover soil.

90. Construction phase - Area #1 - Seeding grass mix with range drill.

91. Construction phase - Area #1 - Seeding grass mix with range drill.

92. Construction phase - Area #1 - Seeding grass mix with range drill.

93. Construction phase - Area #1 - Seeding grass mix with range drill.

94. Construction phase - Area #4 - Seeding grass mix with range drill.

95. Construction phase - Load of straw for mulch.

96. Construction phase - Area #2 & #3 - Seeding in Area #2 and mulching and hand crimping in Area #3.

97. Construction phase - Area #1 - Mechanical mulching.

98. Construction phase - Area #1 - Mechanical mulching.

99. Construction phase - Area #1 - Mechanical mulching.

100. Construction phase - Area #2 - Mechanical mulching.

101. Construction phase - Area #1 - Mechanical mulching.

102. Construction phase - Area #3 - Mulching and hand crimping.

103. Construction phase - Area #3 - Mulching and hand crimping.

104. Construction phase - Area #3 - Mulching and hand crimping.

105. Construction phase - Area #4 - Crimping mulch.

106. Construction phase - Area #1 - Crimping mulch.

107. Construction phase - Area #1 - Crimping mulch.

108. Construction phase - Area #1 - Revegetation process completed.

109. Construction phase - Area #2 - Revegetation process completed.

110. Construction phase - Area #2 - Revegetation process completed.

111. Construction phase - Area #2 - Revegetation process completed.

112. Construction phase - Area #4 - Revegetation process completed.

113. Construction phase - Debris burial pit - Revegetation process completed.

114. Construction phase - Debris burning pit - Revegetation process completed.

115. Construction phase - South Fence Area - Revegetation process completed.

116. Construction phase - Area #3 - Revegetation process completed.

117. Construction phase - Area #3 - Revegetation process completed.

118. Construction phase - Area #3 - Revegetation process completed.

119. Equipment - Michigan M-110 scraper.

120. Equipment - Terex TS-14 scraper.

121. Equipment - Case 580 backhoe.

122. Equipment - International water truck.

123. Equipment - Backhoe and water truck.

124. Equipment - Ford dump truck.

125. Equipment - John Deere 16′ tandem disc.

126. Equipment - John Deere "B" rangeland drill.

127. Equipment - John Deere "B" rangeland drill and Ford 9600 tractor.

128. Equipment - John Deere "B" rangeland drill with trailer.

129. Equipment - Crimper on Case bucket.

130. Equipment - Case 580 with crimper.

131. Equipment - Custom built mulcher.

132. Equipment - Custom built mulcher.